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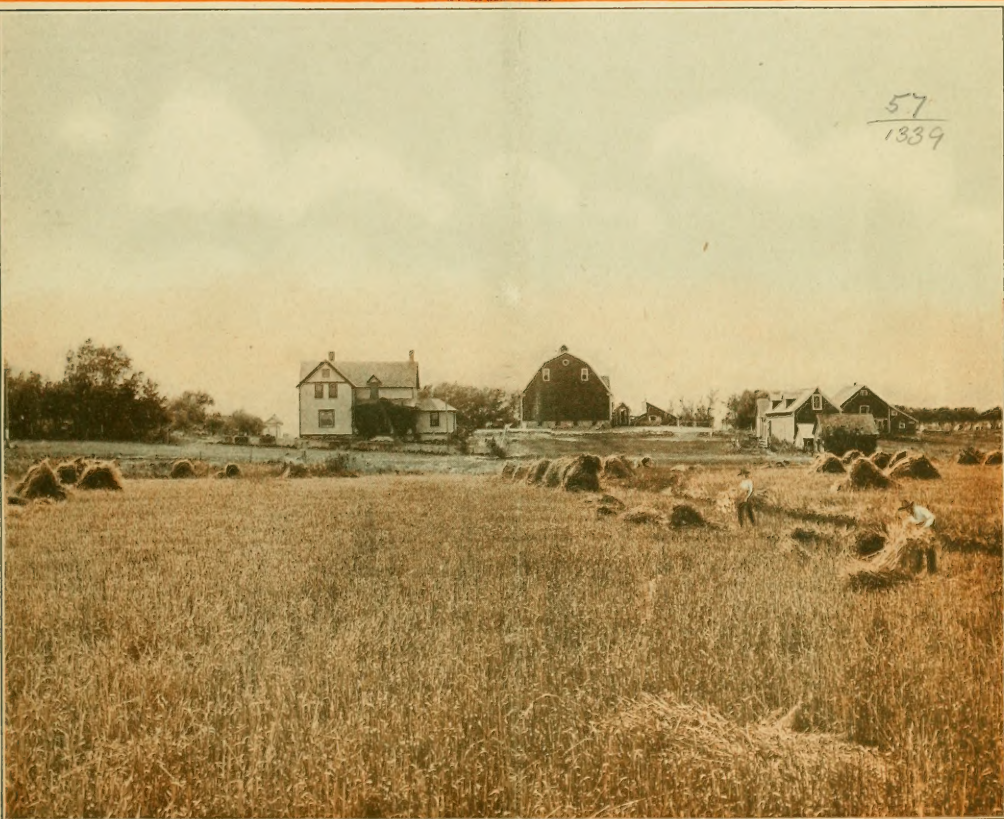




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NORTH DAKOTA

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AGRICULTURAL SERIES NO. 3

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UNITED STATES RAILROAD ADMINISTRATION

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FOREWORD

Fargo, North Dakota

To the man of small means who seeks industriously to build a home of his own, North Dakota offers an unusual opportunity. To the man who is able to invest in considerable amount and also give his entire time and effort to farming, North Dakota gives promise of most gratifying returns.

The attention of the home seeker who contemplates a change of location is invited to the pages of this booklet. The contents have been most carefully prepared by members of the agricultural college, representatives of the agricultural section, United States Railroad Administration, and others, all of whom are eminently qualified by training and experience to set forth the facts as they exist. I take pleasure in commending this publication.

To make a success in North Dakota, the farmer must meet the North Dakota conditions: The crops grown, the methods of culture, the growing of fruit and trees, the raising of stock, etc., must be done according to good North Dakota practice. These problems have been investigated by the North Dakota Agricultural College through the experiment station, which operates at thirty points in the State, and the results are published in bulletins and circulars. As president of the North Dakota Agricultural College, I invite you to make use of its four divisions: Resident Instruction, Experiment Station, Regulatory, and Extension. The Experiment Station with its data and the Extension Division through its county agents and other field workers can be of special service to you in your farming operations.

A study of the following pages will give you some idea of the opportunities the State offers. We invite you to come and look them over.

E. F. Radd.

President, North Dakota Agricultural College.

Bismarck, North Dakota

The State of North Dakota is in a position at the present time to offer greater inducements to settlers, home seekers and home builders than at any other time in its history. In extending an invitation to persons seeking farms or homes, North Dakota is calling attention to the industrial program of the State which ushers in "A New Day in the State."

The Sixteenth Legislative Assembly in Senate Bill 19, which passed both houses of the Legislature and was signed by the Governor, has provided for the loaning of the credit of the State to home or farm builders, to enable them to establish farms or homes on the most advantageous terms. A bond issue has been provided for by the Legislature to finance this

proposition. The State is permitted to loan its credit for the erection of homes costing up to \$5,000 and farms costing up to \$10,000 each.

Under the terms of this act any person may open a home buying account with the State. They may deposit with the State their savings, so much per month, on which the State will allow interest. Whenever any person has deposited savings or monthly payments or a lump sum equal to twenty per cent of the total cost of building or buying a home or farm desired by the applicant, the State will loan the applicant the balance of the purchase price at interest rates covering only the cost of carrying out the provisions of the act. The applicant can immediately take possession of the farm or home, on which the State will take a mortgage and the indebtedness may be repaid in small annual installments, that will result in the payment of the principal in from ten to twenty years.

This is only one of many of the important acts included in the new North Dakota industrial program.

In addition the State Legislature has passed a grain grading law which is one of the fairest to the producer of any existing in any state; it has provided for State owned and operated hail insurance at cheap rates on crops; it has provided for a great central reserve bank owned and operated by the State, which bank will not only loan farmers and settlers money on first mortgages on land but will facilitate the financing of producers by loaning money on warehouse receipts for stored farm products. This great central bank will place credit under public jurisdiction and will have the effect of making banking and financial conditions in North Dakota more favorable to new settlers than they ever have been.

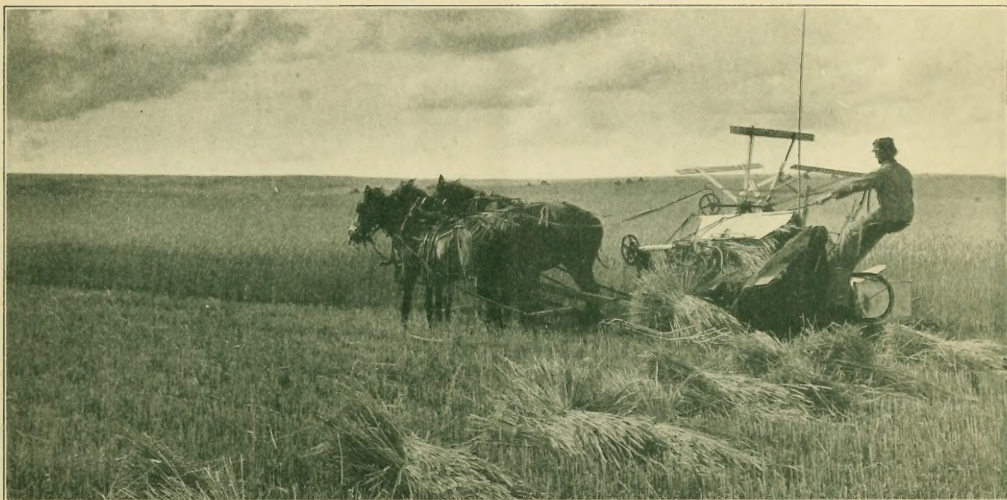
Besides these laws adopted by the last Legislature which the State expects will attract settlers from every part of the United States, the Legislature of North Dakota two years ago adopted a seed and feed bonding act, an act which enables farmers of the State to borrow through their counties, money for feeding stock or for sowing crops, at cost rates of interest, and which the farmers of the State last year freely available themselves of.

As long as the supply lasts the Industrial Commission of North Dakota, Bismarck, N. Dak., will send to any person desiring it a pamphlet called "The New Day in North Dakota" which contains copies of the principal laws relating to the new industrial program enacted by the Sixteenth Legislative Assembly last winter. Persons desiring this book should enclose four cents for postage.

J. N. Hagan.

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Commissioner of Agriculture.



Wheat harvesting in North Dakota where more than one hundred million bushels were produced in 1918

North Dakota

North Dakota was made for farming. Its broad, rich acres are spread out on a level or gently undulating plain. The making of a farm requires only turning the sod with the plow. The lay of the land makes possible the using of the most modern farm machinery and in large units. The four, five, or six horse team is the rule, and one man doing two or three, or even six, men's work, as compared to some other sections. The conditions are ideal for using the tractor. Land is so abundant and cheap that more is worked by nearly every one than can be done well, yet the returns per farmer have been greater than in the older states.

The distribution of the rainfall is most advantageous. Nearly all of it comes during May, June, and July, when the crops are growing. The fall and winter precipitation is light. This results in very little run off, and hence no leaching of the soil, which may in a large measure account for its richness. This is also in a large measure responsible for the good roads that can be had at all seasons.

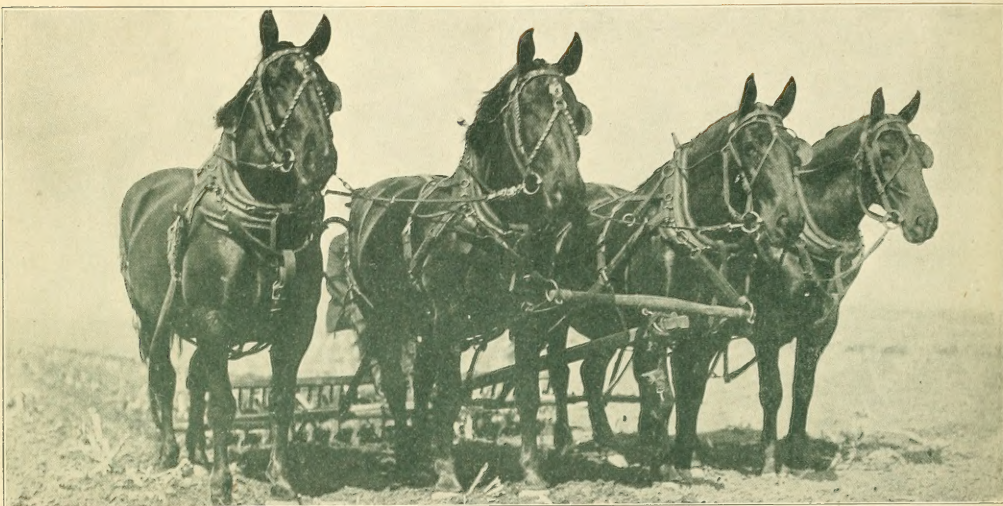
RAINFALL AVERAGES

	No. Yrs.	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.
Amenia....	22	.46	.38	.61	2.00	2.84	3.74	3.18	2.80	2.01	1.33	.80	.39
Wahpeton...	23	.41	.48	1.00	2.18	2.61	3.80	3.81	2.01	2.33	1.51	.42	.39
Pembina...	45	.64	.88	.92	1.65	2.37	3.49	2.52	2.27	1.78	1.43	.07	.80
Devils Lake	42	.39	.50	.84	1.21	2.33	3.42	2.67	2.61	1.25	1.19	.60	.50
Jamestown...	26	.04	.58	1.07	1.75	2.66	3.69	2.74	2.58	1.52	.95	.67	.71
Bismarck...	43	.55	.58	1.02	1.64	2.18	3.33	2.32	2.02	1.28	.98	.58	.58
Williston...	39	.58	.41	.63	1.15	2.06	3.45	1.88	1.47	1.42	.77	.57	.57
Bottineau...	26	.45	.38	.84	.87	2.10	3.22	3.81	2.88	1.66	1.03	.54	.50
Minot.....	22	.47	.44	.76	1.18	2.03	3.50	1.89	2.17	1.58	.91	.57	.41

The summers are ideal for growing crops, and the days are about as warm as in Iowa or Illinois but the nights are cool. The winters are cold but bright and sunny.

Most of the soils are rich, fine-textured loams, giving them a large capacity for storing moisture. The subsoil in most parts is a fine clay. Water is easy to find. In several sections flowing wells can be secured.

Trees do well when planted on properly prepared land and cultivated for a few years. Vegetables of the finest quality can be grown in abundance and



A Thoroughbred and reliable power plant like this one, found on many North Dakota farms

such small fruits as currants, gooseberries, Juneberries, and plums do well.

The fuel problem has been forever solved in North Dakota. The western half of the State is underlaid with lignite—a kind of soft coal. In most cases the farmer can help himself, or it can be purchased at the mines for \$1.50 to \$2.00 per ton.

The school advantages of the State are well developed. The large well-built schoolhouses are a surprise to those who visit the State. Many of the high schools offer courses in agriculture and home economics. The four normal schools—the Science School, the Industrial Normal, the University, and the Agricultural College—offer instructions on nearly all subjects.

The church life of the State is well developed. The leading fraternal societies, both social and beneficiary, are to be found in most localities.

North Dakota is one of the leading grain-producing states; producing more spring wheat than any other state, about half the flax crop of the United States, more rye than any other two states, and is third in barley production. Sixty million bushels of oats, 9,000,000 bushels of potatoes, and about 9,000,000 bushels of corn were produced in 1918.

This State is eminently a live stock one, as evidenced by the great buffalo herds that formerly roamed the prairies of North Dakota. The rich and

abundant native grasses, light winter snow, and the cold but dry winters were very favorable to them.

Two packing plants have been erected and many flour mills are in operation. There are creameries in many sections of the State.

The transportation facilities in North Dakota are the best. Four transcontinental railroads cross the State. From these branch lines radiate so that practically all sections are within convenient distance of shipping points.

In many sections farmers have put up rural telephone lines and the rural free delivery of mail reaches all parts.

The climate of North Dakota is extremely healthful for both man and animal. The air is unusually dry, clear, and bracing. Comfort and health are promoted both in winter and summer by the absence of a surplus of moisture or humidity. Summer days are warm but summer nights are usually cool and refreshing. Long days of sunshine due to the northern latitude cause a rapid growth of crops and hasten ripening during the growing season. Heat prostration and sunstroke are unknown.

Spring work starts between the first and the middle of April, as the warm days bring the frost from the ground. Usually about six weeks of clear spring days follow, permitting work and seeding to be done without delay.



Some of the buildings at the Agricultural College at Fargo, North Dakota

DAYS FREE FROM FROST

According to the United States Weather Bureau the frost free period varies from 110 to 150 days.

The number of days required for maturing crops are as follows:

Wheat.....	95 to 106 days	Millet.....	81 to 112 days
Oats.....	88 to 102 days	Speltz.....	91 to 92 days
Barley.....	82 to 94 days	Corn.....	about 100 days
Flax.....	83 to 95 days		

During the winter there is a comparatively light snowfall. There is but little mud, slush, or sleet. Roads are almost always in good condition and facilitate marketing. While below zero weather is common, yet, because of the dryness of the air, it is not unpleasantly cold. Stock often graze out most of the winter, feeding on volunteer growth in stubble fields and straw piles; feed lots are clean and dry, and fattening animals "keep on their feed." North Dakota's climate results in rugged, vigorous animal life.

NORTH DAKOTA SOILS

The plant food elements are abundant in the soils of this State. Most of the rain falls during the cropping season. Even the lime, which is one of

the first elements to be thus lost, is so abundant that the addition of lime is not necessary even for legumes. In trials with commercial fertilizers at the North Dakota Experiment Station the fields fertilized often do not grow a larger crop than the one to which no fertilizer has been added, but barnyard manure applied in a good rotation gives on an average an added return of \$1.50 per ton at pre-war prices for crops.



North Dakota mortgage lifters



Typical scene on one of North Dakota's splendid wheat farms

Most of the soils in the State are loams, silt loams, and sandy loams with smaller areas of clays, clay loams, and sand. These soils compare in plant food elements with the prairie soils in the corn belt. The lime content is the largest in the soils of the western part of the State.

The Red River Valley, the glacial prairie plains region, and the unglaciated areas west and south of the Missouri River, are the three great soil divisions. The Red River Valley soils are fine textured and black to a depth of ten to forty inches with a silty clay subsoil. Sandy loam and sand occur in narrow ridges on the west side of the valley. The soils of the Red River Valley are classed among the richest in the world. Alkali is present in injurious amounts in small areas and drainage is needed in some places to secure the best results.

The glacial prairie plains in general cover the area between the Red River Valley and the Missouri River. It is characterized by its undulating to rolling surface. The natural drainage is good. The Mouse River loop is in the northern part of this area. It resembles the Red River Valley in soil and surface. Silt loams and sandy loams are the principal soil types in this glaciated region. These soils have a good plant food content, are black in color, and usually eight to fourteen inches deep.

The subsoil is of the same or a finer texture than the surface soil. These soils are easily tilled.

Where detailed soil surveys have been made it has been found that a type, known as the Barnes loam, is one of the most extensive of the glacial prairie plains region. This is a black soil underlaid by a grayish yellow loam to silty clay loam subsoil. It is easily tilled and well suited to the growing of all crops adapted to this region. Analyses of this type show that it contains from 1,000 to 12,000 pounds of phosphorus, from 5,000 to 6,000 pounds nitrogen, about 37,000 pounds of potassium, and about four and one-half tons of limestone per acre surface seven inches. An acre of the subsurface (7 to 18 inches in depth) of this soil type contains 150 tons and the subsoil (18 to 40 inches in depth) about 450 tons of limestone.

The soils of the unglaciated region in southwestern North Dakota are lighter in color than those derived from glacial drift. The surface is yellowish brown to dark brown, becoming somewhat lighter in color with depth. The subsoil is often quite gray, due to the presence of lime concretions. The surface is usually rolling and in some localities is too rough for anything but grazing. A considerable area in the unglaciated part of the State has been broken up and in recent years good crops of small



Three generations—whose influence will extend through many more

grain, alfalfa, and corn are produced. The soils are a little lower in organic matter than those of the glaciated part of the State, but otherwise do not differ materially from them in plant food content.

WATER SUPPLY

The farm water supply is derived from streams, springs, and surface and artesian wells. In some areas the water from the latter contain a relatively large amount of soluble salts. The surface wells vary from 15 to 75 feet in depth. The artesian wells in the Red River district are usually 250 to 400 feet deep. The streams west of the Missouri River furnish water in the grazing districts and in places natural springs furnish a supply of good water.

CROPS

North Dakota is the greatest spring wheat state in the Union.

Spring wheat was first grown successfully in the Red River Valley over a hundred years ago by the Selkirk Colony which settled at Pembina. Practically all of this valley was broken up between 1880 and 1890, and this section of the State became justly famous as the "bread basket of the world."

New settlers pushed westward from the valley and the country was rapidly broken up until now nearly one-half the tillable land in the State has been turned over by the plow. Wheat is the greatest crop for the pioneer farmer because it is so easily grown with limited capital and machinery. Spring wheat is sown during the month of April on land which has been plowed the fall before or which has been in a cultivated crop the previous year.

The wheat requires no further attention until harvest time. A man and four horses will cut and bind fifteen to twenty acres of wheat a day; another man will shock it up. After a period of ten days or two weeks it is ready for the threshing machine. Usually this machine is provided by the man who makes a specialty of that business. He provides machinery and labor, including board for men and teams. The men are fed in a cook car which is hauled from farm to farm, thus saving the farm women from the heavy burden of extra work. All the farmer has to do is to haul the threshed grain away from the machine. The average machine will thresh about 2,000 bushels of wheat per day, thus rapidly cleaning off the small grain fields. If the field is within three miles of an elevator it is usually hauled direct to the elevator. At greater distance the grain is run directly into a bin from the spout



One-half of the flax crop of the United States is produced in this State

on the separator and stored there until the fall plowing is done.

After threshing, the farmer prepares the land for another crop of wheat by plowing. However, it is rapidly becoming a thing of the past, as other crops are found to be more profitable than wheat when grown on part of the farm; and when wheat is grown in rotation with corn, potatoes, and the hay crops, it is found to yield about 60 per cent more than where wheat follows wheat.

The North Dakota Experiment Station has shown

rather conclusively that wheat grown in rotation with other crops on the demonstration farms and sub-stations which are scattered throughout the State, will yield just as heavily on the average in western North Dakota as in the Red River Valley. The yields will not vary so much from year to year in the valley as they do in the western part, but the average will be just as great in western North Dakota as in the eastern part of the State. When all of North Dakota's 40,000,000 arable acres are farmed and systematic crop rotations grown on the farms, the State will probably be producing three times the amount of wheat that it is producing at the present time.

No section of the country offers greater opportunities to the willing and industrious individual farmer than North Dakota. Many farmers here during this past year have produced, without help from any one until threshing time, 4,000 bushels of wheat, or enough wheat to feed 800 people for a period of one year.

North Dakota is the greatest state in the Union in the production of winter rye. Like spring wheat, this crop is well adapted to extensive farming. One man can easily produce 3,000 or 4,000 bushels of rye with his own labor. Winter rye is usually sown in the stubble in the fall as soon as the spring wheat crop is removed. It is no uncommon sight to see a



Waiting for dinner



Hemp—one of the promising new crops of North Dakota

grain drill following immediately behind the binder, the wheat shocks being set up on the newly cut, freshly seeded field. Winter rye usually germinates quickly and makes a good growth in the stubble in the fall. It sometimes furnishes considerable feed for stock during the the late fall and early spring. This crop requires no further work until it is ready for harvest. By this method the land never has the plow or harrow put upon it from the time the wheat is seeded until after the rye is cut the following year. Rye usually heads out fully the first week in June.

The rye crop is usually harvested about the middle of July, and is often threshed and put into the elevator before the spring wheat crop is ready to cut. Rye, as a rule, is threshed at the same time as other small grain crops. In 1918 North Dakota produced enough rye to furnish bread to feed a city the size of greater New York for an entire year.

Only two states in the Union produced more barley in 1918 than North Dakota. It can be sown as late as the month of June and be reasonably sure of producing a good yield, as it will ripen in ninety days from the time it is seeded. Much of the barley produced is shipped out of the State. A large amount of it, however, is used for feed, particularly for hogs and cattle. As a cheap feed

of good quality for live stock barley is only slightly surpassed by corn.

This State produces oats of the finest quality, and a weight of forty pounds to the bushel is not uncommon. The oat crop is seeded at the same time as the spring wheat crop and on identically the same kind of land. For this reason, oats are not grown as extensively in North Dakota as they are in some other states.

North Dakota produces about one-half the flax grown in the Union. New sod is plowed in April, May, and early June and then seeded to flax. It is not an uncommon thing for a settler to buy a new farm, break it up and put it into flax and from the returns of the one crop pay all his expenses and cost of the land. During the past few years flax has sold for \$1.50 to \$4 a bushel on the local market. The yield per acre frequently runs from 15 to 20 bushels, the cost of production being low. The extra work required in growing a crop of flax after breaking new land in the spring, is to roll the sod to make it level, then disc to secure a mulch, and the ground is ready for seed. About one-third of a bushel of seed per acre is required. Flax requires no further treatment until the time of harvest, which is usually in the month of September, and there is no pleasanter sight anywhere than



The State is well supplied with churches of all denominations

a field of flax in full blossom in the month of August.

This crop is cut and left loose in piles on the ground, no twine being required. A few days after cutting it is ready for the threshing machine. When a newcomer to the State who has paid \$20 to \$40 per acre for his land threshes his first flax crop and finds it yields fifteen bushels to the acre and sells for \$3 per bushel at the elevator, he is sure to be satisfied with his future location. The land which has been in flax is ready to be sown to spring wheat the following spring without plowing. When the grass or pasture land is broken up in rotation, it is usually sown to flax. Wilt is a disease that made flax growing in some of the older states unprofitable. Wilt-resistant varieties of flax have been bred by the North Dakota Agricultural Experiment Station. These varieties make it possible for the North Dakota farmer to continue to grow flax as one of his regular crops.

Many people have the idea that corn is a crop not adapted to North Dakota conditions. In the winter of 1804 and 1805 Lewis and Clark when on their way to the Pacific Coast lived through the winter in this State largely on corn which was supplied them by the Mandan Indians. Probably hundreds of years before the white man came to North Dakota the Indians cultivated corn along

the Missouri River. Lewis and Clark stated that they had eight distinct varieties of corn.

Corn is grown on over one-half million acres annually in North Dakota and it is one of the most certain crops which may be grown in the State if acclimated varieties are planted. The yield of shelled corn is high, not uncommonly running over fifty bushels to the acre.

In 1916 the Bureau of Statistics of the United States Department of Agriculture places the yield of corn in North Dakota at 26.5 bushels to the acre.

A field of corn on the North Dakota Experiment Station was hogged down last fall (1918), the net income being \$45 per acre. An acre of corn if kept well cultivated can be depended upon to produce from 200 to 400 pounds of pork. There is no more efficient corn picking machine than a hog which has grown up on North Dakota alfalfa.

There are hundreds of silos in the State. In sections where the water table is not too near the surface, pit silos are becoming popular.

While North Dakota at present is raising over half a million acres of corn, the time is soon coming when 20 per cent of the cultivated land will be put into this crop. This will mean four or five million acres, and then the State will be truly one of the great corn states. The two purposes for which corn



Commercial potato growing is a profitable industry in North Dakota

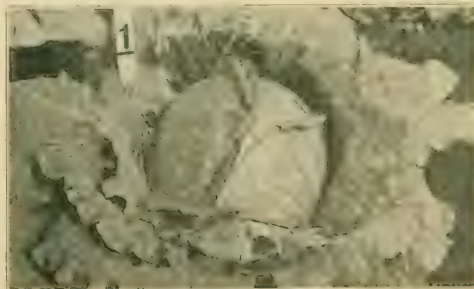
will be grown, are for fattening hogs, and feeding steers and the dairy cattle which will ultimately be kept in great numbers. The corn crop is the one great cultivated crop which can be grown to good advantage with wheat and the other small grains.

Potatoes, like corn, are a cultivated field crop which can be grown quite extensively. At the present time about 90,000 acres are put into this crop annually. The quality of North Dakota potatoes is excellent, and seed potatoes from this section are in favor throughout the states in the Central West and South. Potatoes grown by one farmer in the northeastern section of the State for the past seven years averaged 125 bushels to the acre. During that period they gave a net profit of \$57.43 an acre per year. Similar results have been obtained in many other parts of the State. Wheat following potatoes will give an average of ten bushels more to the acre than where wheat follows wheat.

Long before the settler came nature had sown North Dakota from east to west and north to south with heavy yielding nutritious grasses. These wild grasses continued to grow until the land was turned over by the plow. Several million acres of unbroken land are pastured and cut over for hay annually,

and two of these native grasses have been tamed, viz., the slender wheat grass and the western rye grass. They are very desirable pasture and hay grasses and are being seeded rather extensively.

Timothy is a very profitable hay crop in the Red River Valley and in some of the more eastern counties. Brome grass makes one of the best hay and pasture crops. This grass is so hardy that it never winter kills, and is a hay that is easy to cure.



A thirty pounder



Thanksgiving birds from this State are in large demand in the Middle West markets

It produces a better crop of hay than timothy for all classes of live stock. It comes the first thing in the spring and is the last grass to stop growing in the fall. It is more palatable than any other grass, either native or tame. Under favorable conditions it will grow five feet in height, and will closely resemble an oat or rye field. While this grass produces well on the poorer land and under harsh conditions, there is no other grass that will respond better to good conditions, to good soil, and to the application of manure.

Sweet clover is a legume crop rapidly coming into favor in North Dakota for both hay and pasture purposes. The soils, being sweet, grow this crop very readily. Contrary to the general belief, horses, cattle, sheep, and swine when they once become accustomed to the use of sweet clover seem to prefer it to anything else, with the exception of alfalfa or brome grass. Sweet clover hay when cut and cured at the proper time yields well, and at the same time enriches the soil and prepares it for the growing of alfalfa.

Sweet clover in many cases proved to be a very profitable crop when left for seed. A yield of three hundred pounds of seed per acre has frequently been harvested. It is readily threshed in the ordinary threshing machine, and the seed can be

hulled by running through an ordinary hulling cylinder or through a scarifier a couple of times.

Millet is an annual hay crop that is grown quite generally by the farmers of this state and as a rule, yields well; often exceeding three tons per acre. It makes an excellent grade of hay for all kinds of cattle, and is planted early in June after the grain crops are seeded. It is usually cut before frost, and if well cured makes an excellent hay.

Red Top does well on the lower lands. It is easily started, does not winter kill, makes good pasture, and if cut and put up at the proper time this hay is the equal of timothy for feeding purposes.

Field peas do well in all parts of the State, and there is no better hog feed than this crop. At the same time they are a soil enriching plant. Peas are planted early in the spring, are in full bloom late in June, and are usually fully matured early in August. A yield of fifteen to thirty bushels per acre is common. Field peas have been worth \$2.50 to \$5.00 per bushel during the last five years. When seeded with oats the mixture of field peas and oats makes very fine feed for dairy cattle, such hay being surpassed only by fine well cured alfalfa.

Alfalfa is North Dakota's best leguminous hay



Sir Pontio, grand champion at the Minnesota, North Dakota, South Dakota, Grand Forks, and Northwestern Fairs, during 1918

crop, the Grimm alfalfa being the most productive. It will stand up under average farm conditions and produce paying crops year after year. Alfalfa can be cut from one to four times, depending upon the local conditions, the amount of rainfall, etc. The climate is such that alfalfa hay is usually easily cured and a finer quality of hay can not be produced.

The soils are so rich in lime that it is not necessary to apply it in order to grow this crop. A good seed bed, seed of hardy variety (the Grimm), and the seed properly inoculated are the things necessary to get a good stand. In western North Dakota the Alfalfa is often seeded in rows and cultivated. In the eastern part of the State it is universally seeded solid and the best farmers cultivate it when sown either way with a special spring tooth harrow early in the spring and after each cutting. The conditions are very favorable to the production of alfalfa seed—large yields being obtained. Alfalfa seed crops that have netted over \$100 an acre have not been uncommon and over \$200 worth of seed have been produced per acre under favorable circumstances in a single season. There is a big demand for North Dakota "Grimm" alfalfa seed in states where a hardy variety is desired.

Hemp is being grown in different parts of the State as a fibre crop. It does well on rich heavy soils.

Several thousand acres have been grown for the past two years. Under favorable conditions it will produce over a ton of fibre per acre. The hemp grows from six to fifteen feet in height and is one of the promising new crops in North Dakota.

In no part of the Union do root crops reach a greater perfection than in North Dakota. It is not difficult to grow twenty to thirty tons to the acre. In combination with hay and straw there is no better cattle feed obtainable. With improved machinery the growing of the rutabaga or Swedish turnip for feed purposes is likely to be greatly increased, as it is an absolutely sure crop if properly cultivated. The storage of root crops is simple. A dug-out or root cellar with a good roof near the barn is all that is necessary. The roots can be dug and stored in October when the other crops are out of the way. They are the best substitutes for silage. They can be kept until late in the spring in a well ventilated root cellar without difficulty.

LIVE STOCK OPPORTUNITIES

The rich limestone soils, the abundant sunshine, and the dry atmosphere lay the foundation for a great live stock industry in this State. The native



Lignite is a cheap fuel in the State. Note the thickness of the vein

grasses are very nutritious, so that cattle can be finished for market on grass alone.

While grain production is the great industry, live stock production is one of North Dakota's greatest possibilities.

Limestone soils are necessary in producing good horses. It brings better bone and better quality than can be secured on other classes of soil. Prairie pastures of western North Dakota are particularly adapted to developing sound, strong-legged, tough-hoofed horses. A strong, well-enforced stallion registration law insures and provides excellent sires of recognized draft breeds in each county and within traveling distance of all farmers.

Pure-bred beef cattle herds of high class are plentiful here, and they are well distributed so that herds are near at hand in any part of the State and offer buyers an easy journey to a good place to purchase a sire.

The price of barley as compared with corn has taught North Dakota farmers that cattle fed on barley bring good returns. At an International Stock Show the North Dakota Agricultural College showed the Shorthorn grade steer "Bob" who won a second place in his class. Bob was picked up in a bunch of steers on the open market and is a good indication of what can be produced under North Dakota conditions.

The climate of North Dakota is particularly well adapted to sheep. The winter weather being cold and dry with comparatively little snow, makes splendid conditions. Pasturing stubble and pasturing off standing corn will take care of the fall grain feeding, and there is enough feed from each of these sources to fatten a heavy population of sheep. Screenings also are an excellent fattening ration. When sheep eat weed seeds the weeds are entirely destroyed as they grind their feed very fine. Sheep fit into farm economy unusually well and eat largely what would otherwise be waste products. They should not be starved on that account, however. They do not require warm housing, still they need special attention, and straw-covered shelters should be provided, particularly at lambing time. The small farmer can have lambs born before active field work begins in the spring, or at a time when he is not too busy to look after them. The state and county fairs of North Dakota give ample evidence that there are good pure bred flocks enough to supply breeding stock of high quality for the entire State.

The man who understands hog feeding and management can do well with that class of stock in North Dakota. To get good returns and paying results from hogs they should be farrowed in March and April and put on the market in November or early December. In other words, they should be



Nutritious grasses lay the foundation for the live stock industry in North Dakota

made to weigh 200 pounds by the time they are eight months old. It is always necessary to make a reasonable amount of that gain on pasture. Alfalfa, sweet clover, rape, and pasture mixtures of cereals, rape and peas can all be used as desired. Alfalfa makes the most satisfactory pasture. Following the pasturing period, during which time they should have about $2\frac{1}{2}$ pounds of grain per 100 pounds of live weight, they may be pastured on field peas by giving them access to a strip at a time until the pea crop is cleaned up, after which they should be turned in to corn.

The live stock population of North Dakota can be increased many fold without curtailing the production of small grains. The crops that are necessary to rotate with grain crops to keep up yields can be marketed to the best advantage by feeding to live stock.

DAIRYING

North Dakota, with its relatively cheap lands and fertile soils that are adapted to the growing of crops suitable for the use of dairy animals, is destined to become one of the leading dairy states. It has, in fact, already made rapid strides in that direction as is evidenced by the increase in number of dairy cows during the past two decades. In 1900 they

numbered 125,000. This number has increased rapidly and steadily at the rate of about 10 per cent per year until at present there are approximately 278,888 dairy cows contributing to the wealth of the State.



Progressive North Dakota stockmen have imported thoroughbred sires from Europe and high grade herds are plentiful over the State



MAP
OF
NORTH
DAKOTA





North Dakota has 5,300 schools. Over \$7,000,000 expended on common schools in 1917. It is the rural schools that represent the very foundation of the educational welfare of the people



A group of boys judging dairy cattle. These boys are attending the Boys and Girls Institute which is held at the Agricultural College annually

This development of dairy farming is based on fundamental reasons that become more urgent as population increases, large farms being divided into smaller units, and the demands on the land increase. These reasons briefly stated are as follows:

Dairy farming uses labor at full capacity, efficiently and economically throughout the year.

It puts farming operations more nearly on a cash basis as a result of a constant, steady income.

It is adapted to high-priced lands and is, therefore, a still greater profit producer on less expensive land.

The dairy cow is the most economical and efficient transformer of farm products into human food.

The return of manure to the soil improves the fertility and makes greater profits always possible.

The highly valued dairy feeds, both roughages and concentrates, are produced abundantly in the State. Legumes, such as clover and alfalfa, grow luxuriantly, while the by-products of wheat — wheat bran, middlings, and shorts are abundant. The use of varieties of corn adapted to the climatic conditions renders silage an easily obtainable roughage to add succulence to the winter ration.

All breeds of dairy cattle do well in the State and while one breed may be more popular than the other there are no climatic conditions which exclude any breed.

POULTRY

The abundance of prairie chickens and the almost countless numbers of ducks that live about the lakes are an indication of the adaptability of North Dakota to poultry production.

The poultry interests are being pushed;

First. By the organization of poultry associations in the State; and through them, and their influence in conducting poultry shows and other poultry demonstrations. There are now about ten of these organizations at work.

Second. By activities of the extension division and experiment station of the college in the assembling and disseminating of information and available material, and the active campaign of Boys' and Girls' Poultry Clubs; members of which raised about 15,000 pure bred chickens in 1918.

Third. By the strenuous campaign of the United States Department of Agriculture for increased pro-



Nearly one hundred and seventy thousand sheep on North Dakota farms spring of 1918. Splendid opportunity for many thousands more

duction of poultry during the years 1917 and 1918.

With the wide ranges of pasture land in some parts of the State much more can and should be made of turkeys. The cost of growing under these conditions is slight and returns are excellent.

The numerous streams, small lakes and wide ranges afford excellent opportunities for the production of ducks and geese and those who have entered upon this branch of the poultry work in the State find the returns exceptionally good.

While there are not exceptionally large individual poultry farms in North Dakota, there are many farms and town lots on which may be found large flocks of well bred, healthy, fine quality fowls of all varieties, chickens, turkey, ducks and geese. The farmers and breeders of North Dakota are beginning to recognize this opportunity. Thousands of chicks are hatched to-day where hundreds were hatched a few years ago. A good beginning has only been made.

FRUITS AND VEGETABLES

Small plantings of apples have been made in all parts of the State, with rather indifferent success, except in the southern tier of counties, where there are good bearing orchards of such varieties as the

Hibernal, Wealthy, Patten's Greening, and Iowa Beauty. Crab apples, excepting only those subject to blight, can be grown in any section. The only other tree fruits hardy in North Dakota are the native plum and compass cherry. The many cultivated varieties of these offered for sale by nursery-men succeed in practically all parts of the State. In the western section such varieties of grape as the Beta, Moore, Early, and Hungarian are successfully grown. Currants and gooseberries find a congenial soil and climate in all parts and the hardier



The County Agents of several counties arranged for and had charge of this boys' encampment



Marketing the corn in a pig skin sack. Nearly half a million head at the beginning of 1918, on North Dakota farms

varieties of raspberries do well planted near a windbreak so that they remain covered with snow. By taking advantage of windbreaks and making a careful selection of soil, strawberries can be successfully grown on almost every farm. Such standard varieties as the Warfield, Senator Dunlap, and Progressive, are as easily grown and are as productive in North Dakota as in many other sections.

There are but few vegetables that can not be produced abundantly and cheaply. This is especially true of celery, onions, parsnips, and the like, that require deep, mellow soil. The earlier sorts of sweet corn and tomatoes can be readily grown in all parts. On different occasions one thousand bushels of ripe tomatoes have been picked from a single acre at Fargo.

During the past season celery of only ordinary size readily brought sixty-five cents per dozen in any of the State markets. As an acre of land produces approximately 1500 dozen, it can readily be seen that there are decided possibilities in the way of celery growing.

Another crop especially suited, that likewise brings large returns, is asparagus. The demand for this, at twenty cents per pound, far exceeds the supply, and the market has so far been very imperfectly developed. A farm garden on any farm with no greater expenditure of money and

labor than would be put in in the average farming region, can be made to produce a very large part of the food for the family throughout the year, beginning with asparagus in May and ending with celery and the root crops in the fall. There are advantages of living in a state where vegetables and horticultural products of various kinds can be easily grown, even if they are applied chiefly to home use.

NORTH DAKOTA TREES AND SHRUBBERY

The forest tree growth is confined to the banks of streams and to the regions in the vicinity of Devils Lake and the northern part of the State, particularly the Pembina and Turtle mountains.

The native species comprise the American Elm, Linden, Burr Oak, Black Willow, Hackberry, Box Elder, Green Ash, White Poplar, and Cottonwood. In addition to these there are the larger shrubs like the Wild Plum, Chokecherry, Red and Black Haw, and the Buffalo Berry. There are also a considerable number of the smaller shrubs such as the Highbush Cranberry, Red Dogwood, Flowering Currant, the Wild Roses and several other species of lesser importance.

The treeless condition of a large part of the State does not indicate that the region is not suitable for trees, any more than that the prairie districts of

NORTH DAKOTA



A visitor to North Dakota will be impressed with the character of the school buildings

Illinois and Iowa would indicate that trees could not be grown there. Trees do well in all parts of the State when given proper care.

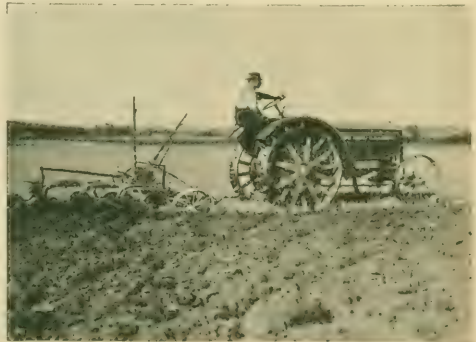
The Cottonwood has been very extensively planted for groves, with fairly satisfactory results. The Cottonwood, however, is better suited for planting as single specimens than in a solid grove. The Box Elder is extensively used as a shade tree for which it is well suited, on account of its rapid growth and dense, bushy habit. The Elm grows readily everywhere if given fair treatment and is especially well suited to street planting in cities and towns. The ordinary Gray or White Willow, while not a native of this country, grows readily and is the most valuable tree for windbreaks and shelter belts. It also is well suited for grove planting, making a rapid growth that can be used both for fuel and for posts. The Native Ash is particularly well suited for grove planting, especially on the lighter, drier soils where the Box Elder, Elm and Willow are not so well adapted. There are a number of the conifers like the Douglas Spruce, Colorado Blue Spruce, Black Hills Spruce, Jack Pine, and Bull Pine that will grow as well here as in most other places, after they have once become established.

The standard flowering shrubs that are ordinarily grown for ornamental purposes, like the Lilac, Snowball, and Honeysuckle, do well, so that one need

never be without the adornments that are considered necessary around a modern home.

SCHOOLS

The state constitution provides for a system of free public schools extending from the primary grades to the University and Agricultural College. Thus



The broad, level prairies make tractor farming profitable and attractive to many



Good highways will be found in all parts of the State

the advantages of free education in the common and secondary schools and institutions of higher learning are open to all.

The basis of education is the common schools, and in this State, largely rural in character, it is the rural schools that represent the very foundation of the educational welfare of the people. A large land grant was received for the common schools—not less than one-eighteenth of the total area of the State having been allotted as an endowment. Sections 16 and 36 of each township of land belong to the common school fund, a total of 2,521,584 acres. A constitutional provision forbids the selling of any of the school land for less than \$10 per acre. The total amount received from land sold is nearly \$19,000,000 and the estimated value of unsold lands, \$31,000,000. The fund for the common schools will, therefore, exceed \$50,000,000. The income from this sum is apportioned to the various districts of the State according to the number of children of school age therein.

It is not only in the possession of this large state fund for school support that North Dakota is fortunate, but there are various other conditions which have conspired to place the State in the front rank in excellence of the common schools. It is now generally recognized that consolidation is a means of

rural school betterment and nearly five hundred of such schools are now organized, with suitable provision for free transportation of pupils. Thousands of farm children are attending, being well housed and well taught. An increasing number of farm children not only are completing the eighth grade here, but find high school courses available. Through the country consolidated school system, secondary education for all—an ideal characteristic of the Northwest—is fast becoming a reality. Here will be found the spirit of modern education, such as hot lunches, nurses engaged by the counties, and progressive courses of study.

The high schools receive state aid according to their classification under the state board of education. Many of the high schools of the State occupy splendid new buildings and do a grade of work comparing favorably with that accomplished in any part of the Union. A visitor to North Dakota will be impressed with the character of the school buildings which are usually the most notable and conspicuous features in the towns and cities. While the majority of the North Dakota high schools are of the general type, many of them maintain departments of agriculture, home economics, and manual training.



"Fording" a North Dakota wheat field

In the field of higher education this State ranks well. Excellent performance stands to the credit of the educators. In the normal school field signal success has been achieved. Scientists and writers in the educational service are recognized as authorities far beyond the boundaries of their own state. The Agricultural College at Fargo has a large enrollment. The State University at Grand Forks also has a large attendance. The five normal schools at Valley City, Mayville, Minot, Dickinson, and Ellendale graduate large classes and the influence of their graduates is felt in every section. The State University maintains a school of medicine, school of education, college of law, college of engineering, college of liberal arts, and a graduate department. The State College of Agriculture and Mechanic Arts is devoted to technology. It maintains schools of engineering, chemistry, pharmacy, agriculture, veterinary science, and education. Its work in biology has attracted wide and favorable attention. Its extension work reaches into every district. The director of extension is in charge of the county agricultural agents. Under the Smith-Lever Act the Agricultural College becomes the center of a campaign of popular enlightenment in vocational fields.

In addition to the major institutions of higher learning, a State School of Forestry at Bottineau and



North Dakota is in the "corn belt." Half a million acres devoted to this crop annually



The Home Demonstration Agents of the Extension Division, Agricultural College, help the farmers wife to solve her problems



Good buildings will be found on practically every farm, a sure sign that farming in this State is successful

a State School of Science at Wahpeton are maintained.

CHURCHES

You will find a church home in North Dakota. Next to the family house the church home is most important. The religious and church life of the State on the whole is strong and aggressive. It is producing results as is shown by the large numbers of churches which have outgrown their present buildings and are erecting permanent structures, as well as by the large number of accessions to membership reported each year, and the increasing stream of benevolences contributed.

People of many states and lands have come and brought their religion with them. Churches of all denominations, Protestant and Catholic, are to be found in every locality, and those whose religious views are different from those of the greater mass of people—Dunkards, Mennonites, Latter Day Saints, and various others—can usually find certain localities where many of the same faith are ready and anxious to welcome them.

Tolerance and co-operation appear to be the spirit which animates the various denominations. In

pioneer days there was so much work to be done that every worker was kept busy and the field was so large that there was ample room for all.

The Country Life Movement, or Rural Community Development Idea, is gaining a strong hold on the life of the churches. The late Colonel Roosevelt did a great thing for North Dakota when he appointed, during his term as President, the country life commissions. The report of that commission has had a profound effect upon the church life of the State, which is, of course, predominantly rural. In some cases also this community work seems to reflect on the churches in the neighborhood and draw them more closely together.

THE COUNTY AGENTS

The services of the county agricultural agents are devoted to practically all of the state agricultural problems. However, to the farmer who contemplates moving into the State it might be interesting to note that crop production, live stock improvement, and the marketing problems demand the major portion of the county agent's time. It is along these lines that the agents are rendering a wonderful ser-



Good farmers, good cows, good hogs; produce "good buildings"

vice to the farmers, and especially to those who are not thoroughly familiar with conditions.

Because of the large acreage of small grain, the county agent has rendered a great service in locating high producing varieties of wheat, oats, barley, etc. Five thousand farmers were assisted by the county agents during 1918 in testing for purity and germination. Two thousand farmers were assisted in purchasing alfalfa seed, the agents realizing the necessity of northern grown seed for the natural alfalfa soil. Nine thousand farmers were advised on the growing of crops. This service is of special value to the new farmer.

The North Dakota Experiment Station has a vast amount of valuable information on the various varieties of small grains, alfalfa, clover, corn, etc., which is the result of years of experiments at the various experiment stations located throughout the State. Practically all of this information is in the hands of the county agent and is of special value to those who are not familiar with highest producing varieties of grain.

The county agents have valuable information on cultural methods in growing crops. They are rendering a great service in increasing and improving

the live stock conditions. During 1918 county agents have purchased for farmers more than 275 pure bred bulls, about the same number of pure bred cows, 155 pure bred rams, and 190 pure bred boars, while through the county agent exchange lists approximately 3,600 head of pure bred and high grade stock have been purchased and sold for the farmers. This not only affords an exchange for the farmer, but also places at his service an agent who can locate desired stock on short notice or find a purchaser.



Class in dairying at the Agricultural College



Barley is one of the important crops and is a valuable feed for stock

Considerable time has been devoted by the county agents to the marketing problem of the State. Live stock shipping associations, wool marketing associations, potato marketing associations, and seed marketing associations, have been organized which have proved a great help to the farmer. Many agents have assisted in the organization of farmers' co operative elevator companies.

The county agent is one of the first men in the county to see when looking over land, and when starting to farm, he can furnish valuable information on the kinds of crops and cultural methods that bring best results. Do not experiment; get in touch with the county agent and start right.

TRANSPORTATION AND MARKETS

An inspection of the map herein, will show at once the advantages the State enjoys in the matter of transportation. Four great Transcontinental Railroads with their main and branch lines reach into and traverse practically every county of the State.

The Northern Pacific, Great Northern, Minneapolis, St. Paul and Sault Ste. Marie, Chicago, Milwaukee & St. Paul, Chicago & North Western, and Farmers' Grain and Shipping Railroads, are repre-

sented in the State by Main Lines and branches. This gives North Dakota direct lines of railway and quick service to the great industrial centers of the country, by all rail, or by rail and boat, and puts all of the great markets on a competitive basis for North Dakota's products.

North Dakota produces the highest quality of hard spring wheat which at present is largely sent to Minneapolis, St. Paul, Duluth, Superior and the east. The State is well supplied with line and farmer owned elevators and has a number of flour mills.

Here will be found a large number of coöperatively owned creameries and some large central butter making plants. Cream shipping stations are operated at practically all towns without creameries. It is the plan of the State to build cold storage warehouses at the leading railroad centers, where butter can be stored and sent to the large markets in car load lots.

Most of the live stock is now sold on the South St. Paul and Chicago markets. Coöperative packing plants are located at Fargo and Grand Forks.

Many potato warehouses have been built and many others projected. The North Dakota Potato Growers' Association is formulating a comprehensive



Along the banks of one of the numerous streams to be found in the State

plan for coöperative marketing. The rapid growth of potato production leads to the belief that the State will soon be one of America's greatest potato sections.

Most of the flax is shipped to Minneapolis and Duluth and there run through the crushers and the oil extracted.

The splendid transportation facilities insures rapid transit to market and the location of the State gives a choice of markets. These are great advantages in marketing and especially for live stock, butter, eggs, and potatoes.

NATURAL RESOURCES

Probably no other state in the Union is so exclusively confined to agriculture as North Dakota. An annual wealth production of between \$200 and \$300 per capita derived almost exclusively from agriculture will at once indicate the importance of this pursuit.

The extensive prairies of rich land require only intelligent farming to perpetuate their wonderful productiveness.

The soil, climate and the records of North Dakota's crops and live stock are ample guarantees of profit and increase to the farmer.

AGRICULTURAL INFORMATION

North Dakota has an exceptionally well developed program for the investigation of its agricultural problems.

The central Experiment Station is at Fargo. The five sub-stations are at Edgeley, Dickinson, Williston, Hettinger, and Langdon. The work at the first four is in coöperation with the United States Department of Agriculture. At Mandan the North Dakota Experiment Station coöperates with the Federal Great Plains Station. To further supplement these, State demonstration farms are operated in the following counties; Pembina, Emmons, Walsh, Stutsman, Nelson, Grand Forks, Ransom, Renville, Hettinger, Morton, Dickey, Traill, Pierce, Barnes, Williams, Richland, and McLean. On these demonstration farms the work, which is largely trying out rotations, is planned by the Agricultural Experiment Station, but carried on by farmers with their ordinary farm equipment. By operating at so many points the Experiment Station secures information on the farm problems in all parts of the State.

Through bulletins, circulars, etc., this information is made available to the public. These can be secured free by writing to the North Dakota Agricultural College, Fargo.



A boy and his "acre cornfield" produced 103½ bushels—a record to be proud of by "any boy" "anywhere"



The silo is making its appearance all over North Dakota—a sure sign that farmers are progressing and making money

Detail soil surveys are being made. Several counties have been mapped and the reports published.

The workers in the Agricultural Extension Division are composed of County Agricultural Agents, Home Demonstration Agents, Boys' and Girls' Club Leaders, and Specialists who meet with the farmer and his family on the farm and in meetings in the counties.

Long and short courses in Agriculture, Home Economics, and Engineering are given at the Agricultural College. These vary from two weeks short courses and three years courses of six months each open to any one, to the four years courses requiring a high school training for entrance.

The county agents, home demonstration agents, and boys' and girls' club leaders put on a week's short course in agriculture and home economics at one or two points in each county during the winter. They also hold a good many one and two day meetings. The extension specialist and members of the Agricultural College faculty and the Experiment Station staff assist at these meetings.

The Department of Agriculture and Labor at Bismarck sends out speakers to conduct one and two day farmers' institutes.

Agriculture and Home Economics are taught in many of the consolidated schools as well as most of the high schools.

Elementary courses in Agriculture and Home Economics are given in the four normal schools at Valley City, Mayville, Minot, and Dickinson; in the Science School at Wahpeton; the Industrial Normal School at Ellendale; and at the Agricultural and Training school at Park River and at Maddock.

Farmers' clubs have been organized in most communities, where the farmers and their families gather to discuss the farm problems and for a social time.

Traveling libraries composed of sets of books on agriculture and on general subjects are sent out by the Library Commission at Bismarck so that any community that will pay the express one way can have one of these sets of books, and when through with it a new one can be sent for.

The Agricultural College is prepared to render any community aid in preparing a program. The package library contains material for debates, material for preparing talks or addresses, recitations, dialogues, plays, pageants, etc. Lantern slides and motion picture films are also furnished. This service also includes help in preparing the musical part

NORTH DAKOTA



More than 2,000 elevators with a capacity of 60,000,000 bushels are operating in North Dakota

of the program. Any one desiring any kind of help in preparing a program should write the North Dakota Agricultural College. Requests for this service have come from every state in the Union and from foreign lands.

Two State fairs are held annually. The one for the eastern part of the State meets alternate years at Fargo and Grand Forks. The western fair is held annually at Mandan.

Fairs are held in many of the counties.

Many of the newspapers publish the articles on farm and home topics distributed by the Agricultural College; in this way making available the latest information on agriculture and home economics.

LAND VALUES

Land Values are still low in North Dakota. The better Red River Valley lands are selling from \$40 to \$100 per acre depending on location and improvements. In the central part of the State the land will average \$10 less per acre than in the Red River Valley. In the extreme western part of the state good farm lands sell for \$15 to \$40 per acre and pasture and grazing lands sell correspondingly cheaper. It is not uncommon for a single crop to pay the cost of purchasing a farm. The great acreage of available farming lands with the still

sparse population has kept the price of land down, in many cases much below its actual earning value. In several instances during 1918, wheat yielded thirty to forty bushels per acre and brought a gross income of \$60 to \$80 an acre on land that can be bought for less than \$60 an acre. The same is true of much of the land which has been seeded to flax, ever since the State has been settled.

CREDIT

The Federal Land Bank has locals in all parts of the State through which loans can be secured on real estate up to 50 per cent of its value on the amortization plan with 5 to 36 years in which to



The buffalo roamed over the prairies of North Dakota. Their hardiness and growth attest to the value of the native grasses



The Dairy cow is making herself known in North Dakota, value of her products twenty-five million dollars in 1918

make the payments. The State Bank also makes loans on real estate on much the same plan. It has this provision however that in case of crop failure, that reduces the income by one-half, the payments may be extended another year. The Home Makers Law makes provision whereby those who desire to buy a home in town or a farm home can, by organizing in groups of ten or more, buy a home or a farm by making a first payment of one-fifth the purchase price.

FACTS YOU SHOULD KNOW ABOUT NORTH DAKOTA

Assessed valuation, \$403,422,258, in 1918.

An actual valuation of \$2,017,111,290.

A population of 680,000.

A per capita wealth of \$2,966. In 1914 the per capita wealth of the entire United States was \$1,318.11.

Value of North Dakota's agricultural products in 1918 was \$431,758,297; being a per capita production of \$888 for the rural population of 486,405, or a little over \$6,000 per farm.

73,346 motor vehicles in 1918, being one for every nine inhabitants.

698 State and 167 National banks, with total deposits of \$175,000,000, or over \$250 per capita.

One bank for every 786 inhabitants.

32,000 square miles of the State are underlaid with more than 600 billions of tons of high grade lignite coal.

One million tons of lignite coal were mined in 1918, from 194 mines.

North Dakota has the highest grade clay in the United States for pressed brick, fire brick, and pottery. Pressed brick products are being shipped both east and west to both coasts, and throughout the Canadian Northwest.

In 1918 grains were raised as follows: Wheat, 101,-010,000 bushels; oats, 60,512,000 bushels; barley, 37,281,000,000 bushels; flax, 6,864,000 bushels; rye, 20,422,000 bushels.

6,377 miles of fully equipped railroads in operation, or 1 mile for each 109 people.

835 post offices, with 600 rural free delivery routes, reaching practically every farmer in the State.

75,000 miles of long distance telephone lines.

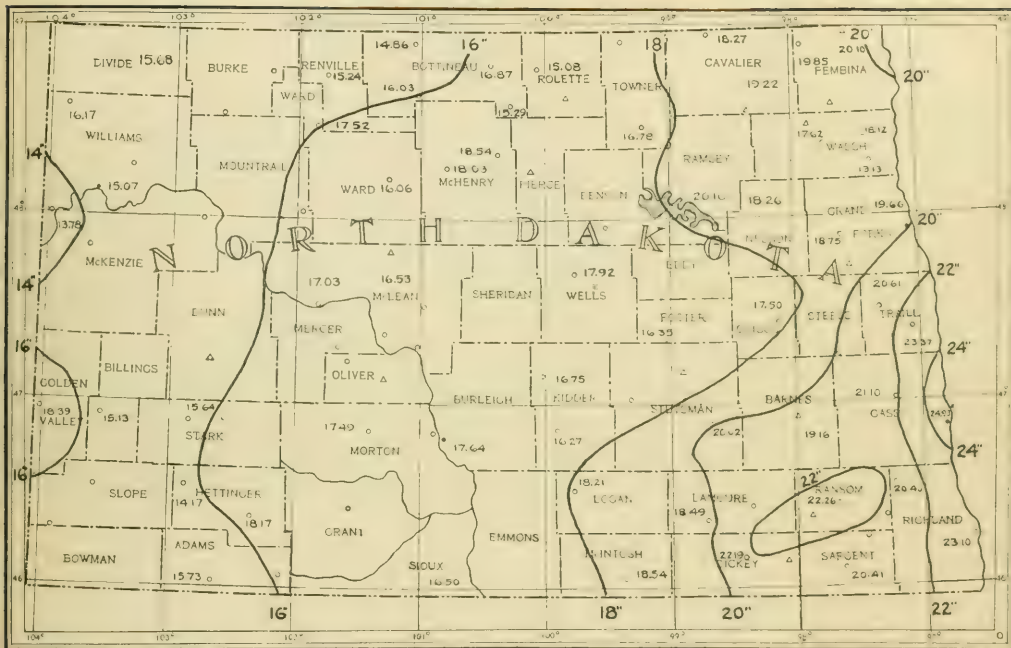
336 newspapers.

238 incorporated cities and villages.

Over 70,000 miles of highways in the State, of which 50,000 miles are graded and drained, and 2,000 miles graveled.

An arable land surface of 40,000,000 acres, with

NORTH DAKOTA



Rainfall map, showing average rainfall for past twenty years

70,149 farms in 1918, an average of 411 acres to each farm, and a total cultivated acreage of 17,928,000.

Natural gas is found in commercial quantities in the northern part of the State, and is in use for illuminating and industrial purposes.

The value of food animals killed for home use in 1917 was \$5,828,000.

North Dakota received in 1917, for cattle, hogs and sheep sold, \$17,813,000.

North Dakota farmers paid out in 1917, \$16,294,000 in farm wages.

Value of the dairy and creamery industry in 1918 was \$25,000,000.

In the Spring of 1918 there were in the State 648,273 horses; 7,088 mules; 983,075 cattle; 167,235 sheep; 447,808 hogs, and 278,866 milch cows.

More than 2,000 elevators, with a capacity of over

60,000,000 bushels, are used every year to handle the grain products of the State.

North Dakota is now definitely located within the corn belt of the United States, the dent varieties having been successfully ripened in every county of the State for several years; the average yield per acre approximates that of many of the larger corn-growing states. Silos have come into extensive use, there being now about 2,500 in the State.

While the acreage of wheat, barley, rye and flax in 1918 exceeded that of any other state in the Union, less than half of its arable area is under the plow, and no greater opportunity exists anywhere for successfully engaging in agricultural pursuits.

It may be truly stated that North Dakota offers a comfortable home and prospective wealth to the energetic and thrifty and extends a welcome to the man of modest means who possesses these qualifications, as well as to the man with capital.



The end of a perfect day

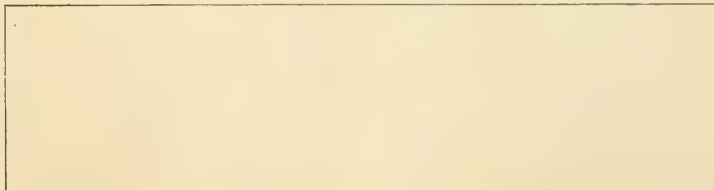
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United States Railroad Administration AGRICULTURAL SECTION

J. L. EDWARDS, Manager
WASHINGTON, D. C.

FOR THE USE OF ALL RAILROADS
IN THE STATE OF NORTH DAKOTA

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